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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/813,912	03/26/2004	James W. Larson	450-68241-01	5068
24197	7590	05/30/2006		
KLARQUIST SPARKMAN, LLP 121 SW SALMON STREET SUITE 1600 PORTLAND, OR 97204			EXAMINER BROWN, DREW J	
			ART UNIT 3616	PAPER NUMBER

DATE MAILED: 05/30/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/813,912	<b>Applicant(s)</b> LARSON ET AL.	
	<b>Examiner</b> Drew J. Brown	<b>Art Unit</b> 3616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 5/15/06 (response to restriction req.).
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) 14-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-9 and 23-26 is/are rejected.
- 7) ☒ Claim(s) 6 and 10-13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/23/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 26 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. In line 5, the term “respectively” renders the claim indefinite because it is unclear to the Examiner what the respective “above and below” locations are.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5, 7-9, and 23-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Behnke (U.S. Pat. No. 3,117,799) in view of King (U.S. Pat. No. 3,586,308).

With respect to claims 1 and 23, Behnke discloses first (18) and second (inherent) spaced apart frame rails, a front vehicle axle (14) extending in a transverse direction relative to the frame rails, where the front axle comprises first (Figure 2) and second (inherent) end portions. A first suspension is associated with the first end portion of the front axle and couples the first end portion of the front axle to the first frame rail (Figure 2). The first suspension comprises a first leaf spring (25) including a central portion overlying the first end portion of the front axle, where the first leaf spring also includes respective first forward (left end of spring) and first rear (right end of spring) leaf spring end portions coupled to the first frame rail (Figure 2). A first control rod (52) has a first end portion pivotally coupled to the first end portion of the front axle (via

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bracket 58) for pivoting about a first pivot (upper pivot in bracket 58) which is below the first leaf spring, and the first control rod has a second end portion pivotally coupled (via member 54) to the first frame rail for pivoting about a second pivot (55). A second control rod (53) has a first end portion pivotally coupled to the first end portion of the front axle (via bracket 58) for pivoting about a third pivot (lower pivot in bracket 58) which is below the first pivot, and the second control rod has a second end portion pivotally coupled (via member 54) to the first frame rail for pivoting about a fourth pivot (55). Behnke also discloses that the second end portion of the front axle (14) has a second suspension that is the same as the first suspension (column 2, lines 49-52).

Behnke does not disclose that the leaf spring is pivotally coupled to the end portion of the front axle for pivoting relative to the front axle about a leaf spring pivot. King, however, does disclose that a leaf spring (74) is pivotally coupled (136) to a first end portion of the front axle (Figure 1) for pivoting relative to the front axle about a leaf spring pivot (Figure 3 and column 3, lines 66-70).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the invention of Behnke in view of the teachings of King to pivotally mount the central portion of the leaf spring to the front axle in order to overcome undesirable brake chatter or bouncing of the wheels (column 1, lines 29-30).

With respect to claims 2, 8, and 24, Behnke discloses that the first pivot and the corresponding pivot on the opposite side of the vehicle are above a front wheel axis (Figure 2) about which wheels (16) supported by the front axle rotate and the third pivot and the corresponding pivot on the opposite side of the vehicle are below the front wheel axis (Figure 2). Behnke also discloses that the corresponding pivots for the third and fourth suspensions are similarly located with respect to the rear wheel axis (Figure 2).

With respect to claims 3 and 9, Behnke discloses that the first suspension comprises a first forward suspension bracket (22) coupled to the first frame rail at a location forwardly of the front axle, where the first forward suspension bracket extends downwardly from the first frame rail (Figure 2), and wherein the second and fourth pivots are carried by the first forward suspension bracket.

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With respect to claim 4, King discloses that the first suspension comprises a first axle mounting bracket (78) having a first pivot pin receiving bore (154) which is positioned above the first end portion of the front axle (Figure 1), where the first pin receiving bore defines a transversely extending first leaf spring pivot (Figure 4).

With respect to claim 5, King discloses that the first axle mounting bracket (78) comprises a first portion having a lower surface (150) positioned at least in part over the first axle end portion and an upper surface (portion of bracket 78 above pin 136 in Figure 3) supporting the first pivot pin receiving bore. King also discloses that the mounting bracket also comprises a leg portion (138, 140) that carries a pivot (166) of a control rod (Figure 1).

With respect to claim 7, Behnke discloses that the vehicle comprises first and second tandem axles extending in a transverse direction relative to the frame rails, the front axle (14) comprising the first axle of the tandem axles and the second axle comprising a rear axle (15) of the tandem axles, the rear axle having first and second axle end portions. Benke, as modified by King, discloses third and fourth suspensions associated with the rear axle similar to the suspensions as discussed above. In addition, the control rods (52 and 53) and their corresponding pivots (55 and 59) are parallel for both end portions of the front and rear axles.

With respect to claims 25 and 26, Behnke discloses the limitations as discussed above.

#### ***Allowable Subject Matter***

6. Claims 6 and 10-13 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is a statement of reasons for the indication of allowable subject matter: With respect to claim 6, the prior art does not disclose plural second members each defining a portion of a leaf spring pivot pin receiving bore in combination with the other claim limitations. With respect to claim 10, the prior art does not disclose tie members and links pivoted to the leaf springs in combination with the other claim limitations.

***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Raidel, King, Heckenliable et al., Best, Fossard, and Masser disclose similar tandem axles assemblies. Stover and Atkinson disclose similar leaf spring pivot means.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Drew J. Brown whose telephone number is 571-272-1362. The examiner can normally be reached on Monday-Thursday from 8 a.m. to 4 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul N. Dickson can be reached on 571-272-6669. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Drew J. Brown  
Examiner  
Art Unit 3616

db  
5/23/06



**DAVID R. DUNN**  
**PRIMARY EXAMINER**